



Pricing Micro Health insurance and Data

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What is health insurance?

- One part is not
 - High frequency, low cost
 - E.g. Pharmaceuticals, Doctor visits
 - Consumption smoothing preferable to insurance
- One part is
 - Low frequency, high cost
 - E.g. hospitalizations
 - Where insurance mechanism can work



Health problem

- “cost recovery and rational use of resources in health care delivery are two sides of the same coin and both need to be addressed simultaneously “
- Nutrition
- Environment
- Public health measures



Barriers to a rational system

- Irrational consumer behavior
 - Marketing of fear
 - Irrational consumption
 - Asymmetrical information
 - Consumers need to change
- Rigidity in medical professions and structures
- Drug dealers
- Irrational integration of public and private systems



The situation

- The average person has little knowledge of their illness, when to get timely treatment and what is cost effective treatment
- Health insurance depends on many components all impacting how to price it.



Fundamentals of pricing

- Premiums have to cover
 1. Cost of administration and distribution of the programme
 2. Cost of reinsurance
 3. Provide a surplus
 4. Cost of the plan benefit
- Depending on the plan there may also be some revenue from investments
- It is normal for a new plan to create deficits for years from start up



1. Cost of admin and distribution

- All the cost of the plan administration and distribution.
 - the methods used to engage the populations and administer the plan will have an impact on the cost of claims
 - E.g. reimbursement results in higher claims
- Should include all cost of the plan
 - Use budget to estimate cost



2. Cost of reinsurance

- All reinsurance has a cost however there is management use of reinsurance
 - Primary use to remove excess risk
 - Other use, to get expertise and to reduce need for capital
- Estimate the cost of the programme to add to premium



3. Margin for Surplus

- All programmes need to generate a surplus
 - Range 1% to 10%
 - Can use risk based capital measures to determine the level of Return on equity desired.



4. Cost of the plan benefits

- This is the most difficult to price
- Start by analyzing population data
 - (Important for programme to capture data to ensure that it can measure results)
- Understand the benefit
- Maintain data base in sufficient detail to monitor results



Common population health cost

- Approximately
 - 33% for Pharmaceuticals
 - 33% for Physicians and test
 - 33% for hospitalization



India and Bangladesh

	India	Bangladesh
% GDP on health	4.9%	3.8%
% paid privately	75%	64%
Per capita OOP	\$31	\$7
In local currency	Rs 1540	Tk 487

- This give you an upper limit estimate for all cost
- This includes all private health insurance and all cost of paid by well off population



Example Hospital benefits

- Important to know the
 - Incidence
 - The cost of claims once there is an incidence
- This can be done for the whole plan
- Or for each of the hospital procedures

- India Rs 500 Bangladesh Tk 160 – an upper limit per capita

Indian health care expenditures

Health care expenditures by types estimated based					
Karnataka study, 2004		Annual Total Rs	HH annual Hospital expense in Rs		
Expense	% of HH exp		Karnataka	Sewa	Yeshasvini
Hospital	2.0%	932	652	553	1,448
OPD	3.5%	1,608			
Delivery	1.5%	672			
Rx bought	0.3%	156			
Rx via pharmacist	0.1%	60			
Other		36			
Total	7.4%	3,464			



Population versus target market

- Population data gives an upper limit
- Household surveys provide an other parameter, however it is usually overstated
- A well managed programme will have a lower cost
- Eg. of hospital cost (why the difference?)
 - Karnataka Rs 652 per household
 - Population Rs 2500 per household
 - Well managed Rs 300 per household



Expected incidence and average claim

- For hospitalization range is 1% to 4% of population hospitalized
- Cost of claims once hospitalized
 - Rs 3,000 to Rs 12,000
- What is claims cost range?



Example 1

- Yeshasvini

- No co-payment or deductible, Surgery only
Maximum Rs 200,000
- June 2006 to May 2007
- Incidence rate = 2.11%
- Average claim Rs 9,762
- Cost of claims Rs 206 ($.021 \times 9762$) per person

	Cardiac	Obstetrics and Gynecology
Incidence	0.474%	0.552%
Average claim	Rs 22, 150	Rs 4,170
Claims cost	Rs 105	Rs 23



Example 2

- Healing Fields Foundation
 - Co-payment of 25%
 - DRG plus transport benefit and post hospitalization, max Rs 20,000
 - Jan 2007 to Sept 2007
 - Incidence rate = 2.21%
 - Average claim Rs 1,806
 - Cost of claims Rs 40 ($.0221 \times 1806$) per person

Hospitalization cost

VimoSEWA

Insurance cost for Catastrophic claims					
SEWA	Adult			Child	
Claims >=	Percent	Cost in Rs	Percent	Cost in Rs	
2000	68%	79	66%	41	
3500	32%	54	22%	23	
5000	22%	39	12%	16	
10000	7%	19	3%	8	

What impacts the cost of benefits?



- Environment
- Untimely access
- Quality primary and secondary care
 - Only what is necessary
- Health education efforts
- Appropriate treatment protocols
- Negotiated prices
- Organization



Data points required

- On the insured population
 - Institutional information
 - Participants information
 - Unique Identifier or key
 - Name (for all family members)
 - Date of birth or age (for all family members)
 - Gender (for all family members)
 - Date coverage starts and stops (for all family members)
 - Location information
 - Coverage history
 - Premium history

■ Source Protecting the Poor, Churchill Chapter 3.5



Data points required

- On the claims file
 - Participants information
 - Unique Identifier or key
 - Name (for all family members)
 - Link to insured file
 - Claims information
 - Date of event, hospitalization, date of release
 - Date claim received
 - Date claim paid
 - If claim rejected, reason
 - Claim reason International Claims Diagnostic classification
 - Amount claimed
 - Amount paid
 - Product history

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Data Base

- Need a robust system
 - Claims paid and premiums paid should match accounting system for each plan year
 - Secure data base
 - Drop down menus to maintain consistency is best



Next steps

- Understand the “total package”
- Develop reasonable premium
- Monitor actual results with what was included in the price